<u>What is claimed is:</u>

1.   A method of configuring a three-dimensional (3D) information input device which performs information input operations using a finger device that is worn by a user and senses the user's finger movement, the method comprising steps of:

5   recognizing whether the user is wearing the finger device and recognizing finger positions of the finger device; and

adaptively configuring the 3D input device based on the recognition results.

2.   The method of claim 1, wherein adaptively configuring the 3D input

10   device comprises:

adaptively configuring a signal-processing unit, which processes movement signals sensed by the finger device, based on the recognition results; and

adaptively configuring a device driver of the 3D input device based on the recognition results and basic set-up information used for information input.

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3.   The method of claim 2, wherein the basic set-up information includes input scenario information related to arrangement of information items that are selected by finger movement and a language used for information input.

20   4.   The method of claim 2, wherein the application configures a soft keyboard based on the recognition results and the basic set-up information, when the application receives the recognition results and the basic set-up information from the device driver.

25   5.   The method of claim 4, wherein the application outputs the configured soft keyboard to an output device.

6.   The method of claim 5, wherein the soft keyboard displays finger positions of the finger device on an array of information items that are selected by

30   finger movements.

7.   A method of reconfiguring a three-dimensional (3D) information input device, which inputs information by using a finger device that is worn by a user and senses the user's finger movement, the method comprising:

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receiving reset information, used for reconfiguration of the 3D information input device, from a user through a user interface; and

reconfiguring a device driver of the 3D input device based on the received reset information.

8. The method of claim 7, wherein the reset information includes information about permission or cancel of use on a specific finger of the finger device, information about selection of an input scenario related to arrangement of information items that are selected by finger movement, and information about selection of the language used for information input.

9. The method of claim 7, wherein the user interface uses a control board of a Window system.

10. A method of recognizing whether a user is wearing a three-dimensional (3D) input device, which includes a finger device with a plurality of sensors attached thereto that sense finger movement and input information based on finger movement signals sensed by the sensors, the method comprises:

(a) acquiring sensor signals, which are used to sense movement of the finger device;

(b) determining, from the acquired sensor signals, whether at least the predetermined number of edges are detected; and

(c) recognizing whether the user is wearing the 3D input device based on the results of step (b).

11. The method of claim 10, wherein step (a) further comprises:

(a1) storing information about sensors experiencing changes between current sensor signal values and previous sensor signal values, and timer values at the time when the changes occur.

12. The method of claim 11, wherein step (b) further comprises:

determining whether at least the predetermined number of timer values are detected.

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13. The method of claim 12, wherein step (c) further comprises:

if at least the predetermined number of timer values are detected, recognizing that the user is wearing the finger device with corresponding sensors outputting the acquired sensor signals attached thereto; and

5   unless at least the predetermined number of timer values are detected, recognizing that the user is not wearing the finger device with corresponding sensors outputting the acquired sensor signal.

14. The method of claim 13, wherein the method further comprises:

10   (d) if it is recognized that the user is not wearing the finger device, outputting information indicating an error value; and

(e) if it is recognized that the user is wearing the finger device, calculating duty ratios by using the timer values, scaling the calculated duty ratios by a predetermined value and outputting the scaled values.

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15. A three-dimensional (3D) input device, which is adaptively configurable and performs information input operation using a finger device that is worn by a user and senses the user's finger movement, the 3D input device comprising:

a pre-processing unit which recognizes whether the user is wearing the finger device and recognizes the finger positions of the finger device; and

20   a signal-processing unit which is adaptively configured to process movement signals output from the finger device worn by the user based on the recognition result of the pre-processing unit.

25   16. The 3D input device of claim 15 further comprising a device driver, which is adaptively configured to process the movement signals output from the signal-processing unit based on the recognition result of the pre-processing unit and basic set-up information for information input.

30   17. The 3D input device of claim 16, wherein the basic set-up information includes a language used for information input and input scenario information related to arrangement of information items that are selected by the finger movement.

18. The 3D information input device of claim 17 further comprising an

application, which configures a soft keyboard that displays the finger positions of the finger device on the arrangement of the information items that are selected by finger movement based on the recognition result and the basic set-up information received from the device driver.

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19.   An apparatus for reconfiguring a three-dimensional (3D) input device which performs information input operation using a finger device that is worn by a user and senses the user's finger movement, the apparatus comprises:
an application which receives reset information, used for reconfiguration of the

10   3D information input device, from a user through a user interface; and
a device driver which is reconfigured based on the reset information received from the application.

20.   The apparatus of claim 19, wherein the reset information includes

15   information about permission or cancel of use on a specific finger of the finger device, information about selection of an input scenario related to arrangement of information items that are selected by finger movement, and information about selection of the language used for information input.

20   21.   An apparatus for recognizing whether a user is wearing a three-dimensional (3D) information input device, which performs information input operation using a finger device that is worn by the user and senses the user's finger movement, the apparatus comprises:
a signal acquiring unit which acquires sensor signals indicating   movement of

25   the finger device;
a port change recognizing unit which determines whether at least the predetermined number of edges are detected from the acquired sensor signals; and
a finger device recognizing unit which recognizes whether the user is wearing the finger device, based on the determination result of the port change recognizing

30   unit.

22.   The apparatus of claim 21, wherein the signal acquiring unit comprises:
a port status storing unit, which stores information about sensors with changes between current sensor signal values and previous sensor signal values;

and

an event time storing unit which stores timer values set at the time of changes between the current sensor signal values and the previous sensor signal values.

5   23.   The apparatus of claim 22, wherein the port change recognizing unit determines whether at least the predetermined number of timer values, stored in the event time storing unit, are detected.

24.   The apparatus of claim 23, wherein the finger device recognizing unit

10   recognizes that the user is wearing the finger device if at least the predetermined number of timer values are detected or recognizes that the user is not wearing the finger device if at least the predetermined number of timer values or less are detected.